

Serial No. 10/047,986
Customer No. 026702

the mouthpiece from the point of powder storage, i.e., from a capsule, bulk storage chamber or a pre-metered chamber of a device. In the metering valve of Figure 2, the valve member 112 alone may be treated. However, additional benefits can be achieved in treating some or all of the other plastic and rubber parts of the valve, including the valve body 114 and the seals 116, 117 and 118. Treatment of the seals 117 and 118 has the additional benefit that friction between the seals 117 and 118 and valve stem 111 is reduced resulting in easier operations of the device. The level of friction between the valve stem 111 and seals 117 and 118 may be further reduced by treatment of the valve stem 111 itself. Such treatment reduces or eliminates the need for silicone emulsions or oils to be applied to the seals 117 and 118 and valve stem 111. Treatment of the seals 116, 117 and 118 also has the benefits of reducing levels of extractibles where the seals are manufactured from elastomeric materials, reducing the permeability of the seals to the propellant in the pressurised dispensing container and reducing the levels of absorption of product onto the surfaces of the seals. The method can also be used to treat components of many other delivery devices including nasal pumps, non-pressurised actuators, foil storage types, breath actuated inhaler devices and breath coordinating devices and so on.

cont.

In the Claims:

Please cancel the originally filed claims and add the following new claims.

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15. (New) An apparatus for dispensing a medicament, wherein at least a portion of one or more internal surfaces of the apparatus that come into contact with medicament during storage or dispensing has a layer of one or more cold plasma polymerised monomers bonded to at least a portion thereof, and wherein the apparatus is not a pressurised container of the medicament or a metering valve for a pressurized container.
 16. (New) The apparatus of claim 15, wherein the one or more monomers for cold plasma polymerisation are selected from the group of materials comprising siloxanes, perfluoro-cyclohexane, perfluoro-hexane, tetrafluoroethylene, trifluoroethylene, vinylidene fluoride, vinylfluoride, fluoroethylene and fluoropropylene.
 17. (New) An apparatus for dispensing a medicament, wherein at least a portion of one or more internal surfaces of the apparatus that come into contact with medicament during storage or dispensing has a layer of one or more cold plasma polymerised monomers bonded to at least a portion thereof, and wherein the layer is not of a cold plasma polymerised fluorinated hydrocarbon.

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18. (New) The apparatus of claim 17, wherein the apparatus includes a metering valve for use with a pressurised dispensing container, the valve comprising a valve stem co-axially slidable within a valve member, said valve member and valve stem defining an annular metering chamber, outer and inner annular seals operative between the respective outer and inner ends of the valve member and the valve stem to seal the annular metering chamber therebetween, where at least a portion of the metering valve includes said layer bonded to at least a portion of an internal surface of the metering chamber.
 19. (New) The apparatus of claim 18, wherein at least a portion of the surface of the valve member includes said layer bonded thereto.
 20. (New) The apparatus of claims 18, wherein at least a portion of the surface of the valve stem includes said layer bonded thereto.
 21. (New) The apparatus of claims 18, wherein at least a portion of the surface of the seals includes said layer bonded thereto.
 22. (New) The apparatus of claims 18, wherein the valve further comprises a valve body in which the valve member is located, the valve body including said layer bonded to at least a portion of a surface thereof.
 23. (New) The apparatus of claims 18, further comprising a gasket extending between sealing surfaces of the metering valve and a pressurised dispensing container, said gasket having the layer of plasma polymer bonded to at least a portion of a surface thereof.
 24. (New) The apparatus of claims 15 or 17, wherein the layer is of a cold plasma polymerised siloxane.
 25. (New) The apparatus of claim 24, wherein the monomer for cold plasma polymerisation is dimethyl siloxane.
 26. (New) The apparatus of claims 15 or 17, wherein at least a portion of a said internal surface having said layer is defined by a portion of the apparatus that is made from a plastic polymer or synthetic rubber.
 27. (New) The apparatus of claims 15 or 17, wherein the apparatus comprises a housing adapted to receive a container for storing the medicament, a mouthpiece, and a duct connecting an outlet of the container with the mouthpiece.
 28. (New) The apparatus of claim 27, wherein at least a portion of a said internal surface having said layer is within the duct.
 29. (New) The apparatus of claim 27, wherein at least a portion of a said internal surface having said layer is within the mouthpiece.
 30. (New) The apparatus of claim 29, wherein at least a portion of a said internal surface having said layer is within the duct.